

Application Number: 10/598,076

Amendment dated: January 25, 2010

Reply to Office Action of: January 21, 2010

Amendments to the Specification:

Please replace paragraph [0006] with the following amended paragraph:

[0006]FIG. 1 is an isometric view of a surgical lighting fixture system in use with a disposable sterile handle cover in accordance with~~embodiment~~ the present invention;

Please replace paragraph [0007] with the following amended paragraph:

[0007]FIG. 2 is an isometric view of ~~the~~ a disposable sterile handle cover (DSHC) of Fig. 1 ~~the invention, in a process of being installed on a handle of a light fixture;~~

Please replace paragraph [0008] with the following amended paragraph:

[0008]FIG. 3 is a topside view of ~~a~~ the disposable sterile handle cover DSHC ~~according to a preferred embodiment of Fig. 1~~ the present invention;

Please replace paragraph [0009] with the following amended paragraph:

[0009]FIG. 4 is a longitudinal sectional view ~~of a~~ skirt of the disposable sterile handle cover DSHC, prior to installation on the light fixture ~~in a pre-application state;~~

Please replace paragraph [0010] with the following amended paragraph:

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[0010]FIG. 5 is a partial view of a longitudinal section ~~along a DSHC~~ of the disposable sterile handle cover, after installation on the light fixture~~application~~;

Please replace paragraph [0011] with the following amended paragraph:

[0011]FIG. 6A is a schematic presentation of the components of the force exerted by an extremely bent spike of the installation on the light fixture~~DSHC~~; and

Please replace paragraph [0012] with the following amended paragraph:

[0012]FIG. 6B is a schematic presentation of the components of the force exerted by a slightly bent spike of the installation on the light fixture~~DSHC~~.

Please replace paragraph [0013] with the following amended paragraph:

[0013] ~~In accordance with the present invention~~According to one embodiment of the invention there is provided a disposable sterile handle cover (DSHC), highly adaptable in terms of size, ~~is provided~~for application onto actuating handles of equipment or fixtures. The DSHC of the invention consists of a substantially tubular bag open at one end, hereinafter referred to as flexible handle cover bag (FHCB). At its open end, a portion of the FHCB is gripped around its entire periphery by a collar ~~a portion of the FHCB fits around a retaining ring, snugly held at its entire perimeter~~, as will be described below with reference to FIGS. 1-6.

Please replace paragraph [0014] with the following amended paragraph:

[0014]In FIG. 1 the use of a DSHC of the invention is schematically shown. A surgical lighting

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fixture 10 has a body 14 and a manual handle covered by a DSHC 16, manipulated by a member of the surgical team 18. In FIG. 2 an isometric view of the DSHC according to a preferred embodiment of the invention is shown stretched on a handle of a surgical light fixture. A DSHC, such as DSHC 16 20 is applied on handle 22 of a light fixture. A flexible handle cover bag (FHCB) 24 covers the lower section of handle 26 is at the bottom. The open end of the FHCB 24 is attached to a skirt 28 by means of an inner ring 30 ~~as will be explained infra~~ which together make up the collar. Ring 32 integrally connected to the skirt 28 increases its structural strength. A set of spikes 34 protruding from the inner ring ~~32~~30 maintain the FHCB 24 stretched as the DSHC is slid upwards as it is applied over handle 22.

Please replace paragraph [0015] with the following amended paragraph:

[0015]In FIG. 3 a topside view of ~~the~~ a DSHC 16 ~~according to a preferred embodiment of the invention is shown~~. Central aperture 40 at the annular skirt ~~28~~42 permits sliding of the DSCH over a handle of a light fixture. The aperture 40 forms a continuum with the lumen of the FHCB (not shown). A set of spikes including such as spikes 44, 46 and 48 having different lengths protrude from the skirt inwards, towards its center. The handle when pushed into the aperture 40 bends some or all of these spikes, depending on their respective lengths. Spike 44 is longer than spike 46 and 48. Spikes ~~50~~34, disposed at a different level than spikes 44, 46 and 48, as seen in Figs. 3-5, supports the FHCB maintaining it stretched during its installation as described above. Variants of the embodiment of the invention have more than one layer of spikes and/or more than three different spikes protruding from the skirt. Typically the inner diameter of a DSHC of the invention accommodates a range of handles widths as known in the market, taking into consideration that small width diameters are to at least reach the longest spikes and bend them. Such a DSHC is suitable for handles of light fixtures having widths in a range that at least bends spikes such as spike 44, and no more than the width required to bend spikes 48. The length of an FHCB of the Invention is made to accommodate the maximal length of available handles.

Please replace paragraph [0016] with the following amended paragraph:

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[0016]In FIG. 4 a section along the longitudinal axis of a DSHC, in a pre-application state is shown. DHSC 1660 has a conical skirt 2862 integral with strengthening cylinder 6432 and an inner cylinder 6630 coaxial with the skirt. The entire FHCB 7424 is folded to fill in the space between spikes 7034 and spikes 72 such as spikes 44, 46, and 48. In this state the DHSC is compact which is useful for handling, saves place in storage and occupies a small storage space and a saves on the small sterile packaging. The two sets of spikes, namely the set below the folded FHCB 7424 and above the FHCB 7424 help secure the FHCB folded.

Please replace paragraph [0017] with the following amended paragraph:

[0017]In FIG. 5 a longitudinal sectional view of a DSHC 16 is shown applied over handle 8222. Skirt 8428 has an inner cylinder 8630 having one or more peripheral Ridges. Ridge 88 is substantially located at the middle of the inner surface of the cylinder wall 8630. A longer spike 9244 and a shorter spike 9446 (not shown) and 48 protrude from the inner rim of the skirt 8428 inwards, towards the longitudinal axis of the skirt, bending downwards by the force applied by handle 8222. An inner ring 96, which is a retention ring snugly fits into cylinder 8630. The mutual hold is strengthened by means of ridge 88 that fits in a compatible groove in cylinder wall 8630. A set of spikes 9834 protrude from the retention ring 96 towards the center of the skirt, these spikes are referred to hereinafter as Inner ring spikes (IRSs). The tubular FHCB 40024 is held tightly between ring 96 and the cylinder 8630 of skirt 8428, curving downwards such that the IRSs 9834 keep it tightly set against handle 8222, which promotes orderly application of FHCB 24 on the handle.

Please replace paragraph [0018] with the following amended paragraph:

[0018]In FIGS. 6A and 6B the forces exerted by the spikes of the DSHC on the handle are schematically illustrated. The force exerted by a long and extremely bent spike is presented in FIG. 6A. The bent spike 40034 exerts a normal component 102 of the bending force on handle, being proportional to the friction force generated between the spike and the handle. In FIG. 6B a shorter spike 404 for example, shorter spikes 48 is considerably less curved than the longer spike 40034

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and exerts a significantly higher normal component of force ~~+04106~~ inducing a significantly higher friction force. Therefore the combination of multiple lengths of spikes promotes adaptation of the DSHC of the invention to various handle widths. The distribution of spike lengths ensures that for every handle width available, at least some spikes will generate a stronger friction force above such a threshold as to hold the DSHC secured to the handle. The additional layer of IRSs serves mainly for stretching the FHSC along the grip of the handle from its bottom up, but also supports securing the DSHC to the handle of the operating room appliance.